

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

- 1 1. (Original) An apparatus for use in a cephalostat comprising:
 - 2 a collimator for defining the shape of an X-ray beam;
 - 3 a soft tissue filter screen for attenuating a portion of the X-ray beam,
 - 4 wherein the soft tissue filter screen comprises:
 - 5 a) an anterior facial portion having a leading edge, wherein
 - 6 the leading edge is located at the most posterior position of the anterior facial
 - 7 portion, and
 - 8 b) a submental-neck portion coupled to the anterior facial
 - 9 portion and having a leading edge at a position posterior relative to the leading edge
 - 10 of the anterior facial portion,
 - 11 wherein the soft tissue filter screen is independently adjustable relative
 - 12 to the collimator.
- 1 2. (Original) An apparatus according to claim 1, wherein the soft
- 2 tissue filter screen is L-shaped having a first leg and a second leg disposed
- 3 perpendicular to one another, wherein the anterior facial portion is the first leg and
- 4 the submental-neck portion is the second leg.

1 3. (Original) An apparatus according to claim 1, wherein the soft
2 tissue filter screen is adjustable relative to the collimator in the anterior/posterior
3 direction.

1 4. (Original) An apparatus according to claim 1, wherein the soft
2 tissue filter screen is adjustable relative to the collimator in the superior/inferior
3 direction.

1 5. (Original) An apparatus according to claim 1, wherein the anterior
2 facial portion and the submental-neck portion comprise a unitary component.

1 6. (Original) An apparatus according to claim 1, wherein the leading
2 edge of the anterior facial portion and the leading edge of the submental-neck
3 portion are beveled.

1 7. (Original) An apparatus according to claim 1, wherein the anterior
2 facial portion and the submental-neck portion are modular.

1 8. (Original) An apparatus according to claim 7, wherein the
2 submental-neck portion is adjustable relative to the anterior facial portion in the
3 anterior/posterior direction.

1 9. (Original) An apparatus according to claim 7, wherein the anterior
2 facial portion and the submental-neck portion are connected to one another along
3 mated beveled edges.

1 10. (Original) An apparatus according to claim 1, wherein the
2 submental-neck portion is adapted to enhance radiograph images of the neck
3 contour of a patient.

1 11. (Original) An apparatus according to claim 1, wherein the soft
2 tissue filter screen is copper.

1 12. (Original) An apparatus according to claim 1, wherein the
2 collimator comprises four plates defining an opening to define the X-ray beam,
3 wherein the plates are independently adjustable relative to one another towards and
4 away from the center of the opening.

1 13. (Original) An apparatus according to claim 1, wherein the
2 collimator comprises a single frame defining an opening to define the X-ray beam.

1 14. (Original) A cephalometric radiology apparatus comprising

2 a support structure;

3 an X-ray source supported by the support structure for emitting X-
4 rays;

5 a collimator supported by the support structure and positioned along
6 the path of the X-rays for defining an X-ray beam emitted from the X-ray source;

7 a soft tissue filter screen for attenuating a portion of the X-ray beam
8 and mounted independently of the collimator, wherein the soft tissue filter screen
9 comprises:

10 a) an anterior facial portion having a leading edge, wherein
11 the leading edge is located at the most posterior position of the anterior facial
12 portion, and

13 b) a submental-neck portion coupled to the anterior facial
14 portion and having a leading edge at a position posterior relative to the leading edge
15 of the anterior facial portion,

16 wherein the soft tissue filter screen is independently adjustable relative
17 to the collimator; and

18 an X-ray detector to collect X-rays emitted from the X-ray source.

1 15. (Original) An apparatus according to claim 14 further comprising
2 at least one positioning light to identify an optimum position of the soft tissue filter
3 relative to the head of the patient, wherein said positioning light emits a signal
4 representative of the optimum position, and a controller responsive to the signal for
5 moving the soft tissue filter screen to the optimum position.

1 16. (Original) An apparatus according to claim 15, wherein the
2 anterior facial portion and the submental-neck portion are modular and adjustable
3 relative to one another, and the signal identifies a first data point corresponding to

4 the optimum position for the leading edge of the anterior facial portion, a second
5 data point corresponding to the optimum position for the leading edge of the
6 submental-neck portion, and a third data point corresponding to the optimum
7 position for intersection of the anterior facial portion and the submental-neck portion.

1 17. (Original) An apparatus according to claim 15, wherein the at
2 least one positioning light positions the soft tissue filter screen in at least one of the
3 anterior/posterior direction and the superior/inferior direction.

1 18. (Original) An apparatus according to claim 14, wherein the soft
2 tissue filter screen is mounted between the collimator and the X-ray source.

1 19. (Original) An apparatus according to claim 14, wherein the
2 collimator is mounted between the soft tissue filter screen and the X-ray detector.

1 20. (Original) A method for imaging soft tissue and hard tissue
2 congruently on the same radiograph comprising the steps of:

3 emitting X-rays from an X-ray source;

4 positioning a collimator across the X-rays to define an X-ray beam;

5 positioning a soft tissue filter screen across the X-ray beam
6 independently of the step of positioning the collimator, to attenuate the X-rays
7 passing through a portion of the forehead, nose, lips, chin and neck of a patient,
8 wherein the soft tissue filter screen comprises:

9 a) an anterior facial portion having a leading edge, wherein
10 the leading edge is located at the most posterior position of the anterior facial
11 portion, and

12 b) a submental-neck portion coupled to the anterior facial
13 portion and having a leading edge at a position posterior relative to the leading edge
14 of the anterior facial portion; and

15 collecting the X-rays on a radiograph.

1 21. (Original) A modular soft tissue filter screen system for use with a
2 cephalostat having a collimator for defining an X-ray beam, which system comprises:

3 a soft tissue filter screen for attenuating a portion of the X-ray beam,
4 wherein the soft tissue filter screen comprises:

5 a) an anterior facial portion having a leading edge, wherein
6 the leading edge is located at the most posterior position of the anterior facial
7 portion, and

8 b) a submental-neck portion coupled to the anterior facial
9 portion and having a leading edge at a position posterior relative to the leading edge
10 of the anterior facial portion, and

11 a mounting component supporting the soft tissue filter screen and
12 adapted to be attached to the cephalostat at a position such that the soft tissue filter
13 screen is aligned within the X-ray beam.

1 22. (Original) A system according to claim 21, wherein the soft tissue
2 filter screen is L-shaped having a first leg and a second leg disposed perpendicular to
3 one another, wherein the anterior facial portion is the first leg and the submental-
4 neck portion is the second leg.

1 23. (Original) A system according to claim 21, wherein the soft tissue
2 filter screen is adjustable in the anterior/posterior direction relative to the collimator.

1 24. (Original) A system according to claim 21, wherein the anterior
2 facial portion and the submental-neck portion are modular.

1 25. (Original) A system according to claim 24, wherein the
2 submental-neck portion is adjustable relative to the anterior facial portion in the
3 anterior/posterior direction.

1 26. (Original) A system according to claim 24, wherein the anterior
2 facial portion and the submental-neck portion are connected to one another along
3 mated beveled edges.

1 27. (Original) A system according to claim 21, wherein the anterior
2 facial portion and the submental-neck portion comprise a unitary component.

1 28. (Original) A system according to claim 21, wherein the leading
2 edge of the anterior facial portion and the leading edge of the submental-neck
3 portion are beveled.

1 29. (Original) A system according to claim 21, wherein the soft tissue
2 filter screen is adjustable relative to the collimator in a inferior/superior direction.

1 30. (Original) A system according to claim 21, wherein the
2 submental-neck portion is adapted to enhance radiographic images of the facial soft
3 tissue inferior to the mandible and the neck contour of a patient

1 31. (Original) A system according to claim 21, wherein the soft tissue
2 filter screen is copper.

1 32. (Original) A method according to claim 20 further comprising:

2 identifying an optimum position of the soft tissue filter screen; and

3 generating a signal representative the optimum position,

4 wherein the step of positioning the soft tissue filter screen comprises

5 receiving the signal and moving the soft tissue filter screen to the optimum position

6 by adjusting the soft tissue filter screen in at least one of the anterior/posterior

7 direction and the superior/inferior direction.

1 33. (Original) A method according to claim 32, wherein the anterior
2 facial portion and the submental-neck portion are modular and adjustable relative to
3 one another, and the signal identifies a first data point corresponding to the optimum
4 position for the leading edge of the anterior facial portion, a second data point
5 corresponding to the optimum position for the leading edge of the submental-neck
6 portion, and a third data point corresponding to the optimum position for intersection
7 of the anterior facial portion and the submental-neck portion.

1 34. (Original) A modular soft tissue filter screen system according to
2 claim 21 further comprising a housing for the collimator, wherein the mounting
3 component for the soft tissue filter screen is adapted to be attached to the housing of
4 the collimator.